

B. Claims

The following is a complete listing of the claims, and replaces all earlier versions and listings.

1. (Previously Presented) A substrate processing method comprising:
a closing step of placing a substrate in a processing bath and closing the processing bath;
an evacuation step of evacuating the closed processing bath;
a supply step of supplying a processing solution into the evacuated processing bath; and
a pressure control step of changing an internal pressure of the processing bath with the substrate dipped in the processing solution,
wherein the pressure control step comprises evacuating the processing bath and then pressurizing the processing bath.
2. (Cancelled)
3. (Previously Presented) The method according to claim 1, wherein the pressure control step comprises repeating a cycle including the evacuation and pressurization of the processing bath a plurality of times.
4. (Previously Presented) The method according to claim 1, wherein the pressure control step comprises controlling the internal pressure of the processing bath within a pressure range lower than atmospheric pressure.

5. (Original) The method according to claim 1, wherein a substrate to be processed has a depression, and the pressure control step comprises changing the internal pressure of the processing bath such that an air bubble in the depression is released from the depression.

6. (Original) The method according to claim 1, further comprising a protective film formation step of forming a protective film on a processed substrate before the substrate is unloaded from the processing bath.

7. (Original) The method according to claim 6, wherein the protective film is made of pure water.

8-15. (Cancelled)

16. (Previously Presented) A substrate processing apparatus comprising:
a closable processing bath in which a substrate is placed;
a pressure control mechanism configured to control an internal pressure of said processing bath; and
a supply mechanism configured to supply a processing solution into said processing bath,

wherein said pressure control mechanism evacuates said processing bath before said supply mechanism supplies the processing solution into said processing bath, and then evacuates and pressurizes said processing bath after said supply mechanism supplies the processing solution into said processing bath, while the substrate is dipped in the processing solution in said processing bath.

17-19. (Cancelled)

20. (Original) A substrate processing apparatus comprising:

a closable processing bath for placing a substrate having a depression;

an alcohol supply mechanism for supplying alcohol to the substrate in said processing bath;

a processing solution supply mechanism for supplying a processing solution to the substrate in said processing bath;

a discharge mechanism for discharging the processing solution in said processing bath to outside said processing bath; and

a pressure control mechanism for evacuating said processing bath to evaporate the alcohol and at least a portion of the processing solution in the depression,

wherein said alcohol supply mechanism, processing solution supply mechanism, discharge mechanism, and pressure control mechanism so operate as to repeat a plurality of number of times a cycle including supply of the alcohol by said alcohol supply mechanism, supply of the processing solution by said processing solution supply

mechanism, discharge of the processing solution by said discharge mechanism, and evacuation by said pressure control mechanism.

21. (Original) The apparatus according to claim 20, wherein said processing solution supply mechanism supplies the processing solution to said processing bath such that a liquid level of the processing solution in said processing bath rises across a surface of the substrate.

22. (Original) The apparatus according to claim 21, wherein said processing solution supply mechanism supplies the processing solution to said processing bath such that the liquid level of the processing solution rises at a rate of 0.001 to 1.0 m/s.